

# Claims

[c1] What is claimed is:

1. A method for fabricating a packaging substrate, comprising:

providing a carrier plate having thereon at least one thin copper base layer;

forming a first patterned photoresist layer on said thin copper base layer, said first patterned photoresist layer has a recessed trench area defining a copper circuit pattern;

electroplating copper in said recessed trench area to form said copper circuit pattern including a to-be-Au-plating area that has a larger surface area as the terminal of said copper circuit pattern;

stripping said first patterned photoresist layer;

forming a second patterned photoresist layer exposing said to-be-Au-plating area of said copper circuit pattern;

using said second patterned photoresist layer as an etching hard mask, etching away said thin copper base layer exposed by said second patterned photoresist layer and said to-be-Au-plating area;

forming a third patterned photoresist layer on said sec-

ond patterned photoresist layer to mend a recess under said second patterned photoresist layer;  
using said third patterned photoresist layer as an electroplating mask, electroplating a metal layer onto said copper circuit pattern in said to-be-Au-plating area;  
stripping said second and third patterned photoresist layers; and  
etching away remaining said thin copper base layer being exposed after stripping said second and third patterned photoresist layers.

- [c2] 2. The method according to claim 1 wherein said metal layer includes Ni/Au.
- [c3] 3. The method according to claim 1 wherein after the step of etching away remaining said thin copper base layer, the method further comprises the step:  
forming a solder mask on said copper circuit pattern.
- [c4] 4. The method according to claim 1 wherein said carrier plate is made of insulating materials.
- [c5] 5. The method according to claim 1 wherein said carrier plate is made of plastic.
- [c6] 6. The method according to claim 1 wherein said thin copper base layer has a thickness of less than 10 micrometers.

[c7] 7. A method for fabricating a packaging substrate, comprising:

- providing a carrier plate coated thereon with a copper seed layer;
- forming a first patterned photoresist layer on said copper seed layer, said first patterned photoresist layer has a recessed trench area defining a copper circuit pattern;
- electroplating copper in said recessed trench area to form said copper circuit pattern including a to-be-Au-plating area that has a larger surface area as the terminal of said copper circuit pattern;
- stripping said first patterned photoresist layer;
- forming a second patterned photoresist layer exposing said to-be-Au-plating area of said copper circuit pattern;
- using said second patterned photoresist layer as an etching hard mask, etching away said copper seed layer exposed by said second patterned photoresist layer and said to-be-Au-plating area;
- stripping said second patterned photoresist layer;
- forming a third patterned photoresist layer on said carrier plate to expose said to-be-Au-plating area of said copper circuit pattern;
- using said third patterned photoresist layer as an electroplating mask, electroplating a metal layer onto said

to-be-Au-plating area;  
stripping said third patterned photoresist layer; and  
etching away remaining said copper seed layer being exposed after stripping said third patterned photoresist layer.

- [c8] 8. The method according to claim 7 wherein said metal layer includes Ni/Au.
- [c9] 9. The method according to claim 7 wherein after the step of etching away remaining said copper seed layer, the method further comprises the step:  
forming a solder mask on said copper circuit pattern.
- [c10] 10. The method according to claim 7 wherein said carrier plate is made of insulating materials.
- [c11] 11. The method according to claim 7 wherein said carrier plate is made of plastic.
- [c12] 12. The method according to claim 7 wherein said thin copper base layer has a thickness of less than 10 micrometers.